

FIGURE 1

1	ATGTCAGTGGGAGCCATGAGAAAGGAGTGGGGAGGGGAGTTGGGCTTGGAGGGCGGACG	60
61	GGCTGCCAGGCTACGGAGGAAGACCCCTTCCCGACTGCGGGGCTTGGCTCCGGGACAA	120
121	GGTGGCAGCGCTGGAGGCTGCCGAGCCTGCGTGGTGGAGGGAGCTCAGCTCGGTTG	180
181	TGGAGCAGCGACCGGACCTGGCTGGATGGAGACCTGGAAGCCTCGCTGCTGCCCACTGGT	240
241	CCCAATGCCAGCAACACTCTGATGGCCCCGATAACCTACCTCAGCAGGATCACCTCCT	300
301	CGCACGGGAGCATCTCCTACATCAACATCATGCTTCCGGTGTTCGGCACCATCTGC	360
361	CTCCTGGGCATCATCGGGAACCTCACGGTCATCTTCGGCGTCTGAAGAAGTCCAAGCTG	420
421	CACTGTGCAACAACGTCCCCGACATCTTCATCATCAACCTCTCGGTAGATCTCCTC	480
481	TTTCTCCTGGGCATGCCCTTCATGATCCACGAGCTCATGGGCAATGGGTTGGCACTTT	540
541	GGGAGACCATGTGCACCTCATCACGGCCATGGATGCCAATAGTCAGTTCACCAGACCC	600
601	TACATCTGACCGCCATGGCCATTGACCGTACCTGGCCACTGTCCACCCCATCTCTTC	660
661	ACGAAGTCCGGAAAGCCCTCTGTGGCCACCCTGGTGATCTGCCTCCTGTGGGCCCTCTCC	720
721	TTTCATCAGCATCACCCCTGTGTGGCTGATGCCAGACTCATCCCCCTCCCAGGAGGTGCA	780
781	GTGGGCTGCGGCATACGGCTGCCCAACCCAGACACTGACCTCTACTGGTTCACCTGTAC	840
841	CAGTTTTCTCTGGCTTTGCCCTGCCCTTTGTGGTCAACACGCCGATACGTGAGGATC	900
901	CTGCAGGCGATGACCTCTCAGTGGCCCCCGCTCCAGCGCAGCATCGGGTGGGACA	960
961	AAGAGGTGACCCGACAGCCATCGCCATCTGTCTGGTCTTCTTTGTGTGCTGGGACCC	1020
1021	TACTATGTGTACAGCTGACCCAGTTGTCCATCAGCCGCCGACCCCTCACCTTTGTGTAC	1080
1081	TTATACAATGCGGCCATCAGCTTGGGTATGCCAAGAGCTGCCTCAACCCCTTTGTGTAC	1140
1141	ATCTGTCTGTGAGAGGTTCCGCAACGCTTGGTCTGTCTGGTGAAGCTTCGACGCCAG	1200
1201	GGCAGCTTCGGCTGTACAGCAACGCTCAGACGGCTGACGAGGAGGACAGAAAGCAAA	1260
1261	GGCACCTGA	1269

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FIGURE 2

1	M	S	V	G	A	M	K	K	G	V	G	R	A	V	G	L	G	G	G	S	20
21	G	C	Q	A	T	E	E	D	P	L	P	D	C	G	A	C	A	P	G	Q	40
41	G	G	R	R	W	R	L	P	Q	P	A	W	V	E	G	S	S	A	R	L	60
61	W	E	Q	A	T	G	T	G	W	M	D	L	E	A	S	L	L	P	T	G	80
81	P	N	A	S	N	T	S	D	G	P	D	N	L	T	S	A	G	S	P	P	100
101	R	T	G	S	I	S	Y	I	N	I	I	M	P	S	V	F	G	T	I	C	120
121	L	L	G	I	I	G	N	S	T	V	I	F	A	V	V	K	K	S	K	L	140
141	H	W	C	N	N	V	P	D	I	F	I	I	N	L	S	V	V	D	L	L	160
161	F	L	L	G	M	P	F	M	I	H	Q	L	M	G	N	G	V	W	H	F	180
181	G	E	T	M	C	T	L	I	T	A	M	D	A	N	S	Q	F	T	S	T	200
201	Y	I	L	T	A	M	A	I	D	R	Y	L	A	T	V	H	P	I	S	S	220
221	T	K	F	R	K	P	S	V	A	T	L	V	I	C	L	L	W	A	L	S	240
241	F	I	S	I	T	P	V	W	L	Y	A	R	L	I	P	F	P	G	G	A	260
261	V	G	C	G	I	R	L	P	N	P	D	T	D	L	Y	W	F	T	L	Y	280
281	Q	F	F	L	A	F	A	L	P	F	V	V	I	T	A	A	Y	V	R	I	300
301	L	Q	R	M	T	S	S	V	A	P	A	S	Q	R	S	I	R	L	R	T	320
321	K	R	V	T	R	T	A	I	A	I	C	L	V	F	F	V	C	W	A	P	340
341	Y	Y	V	L	Q	L	T	Q	L	S	I	S	R	P	T	L	T	F	V	Y	360
361	L	Y	N	A	A	I	S	L	G	Y	A	N	S	C	L	N	P	F	V	Y	380
381	I	V	L	C	E	T	F	R	K	R	L	V	L	S	V	K	P	A	A	Q	400
401	G	Q	L	R	A	V	S	N	A	Q	T	A	D	E	E	R	T	E	S	K	420
421	G	T																		422	

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FIGURE 3

1 M S V G A M K K G V G R A V G L G G G S 20
 21 G C Q A T E E D P L P D C G A C A P G Q 40
 41 G G R R W R L P Q P A W V E G S S A R L 60
 61 W E Q A T G T G W M D L E A S L L P T G 80
 81 P N A S N T S D G P D N L T S A G S P P 100
 101 R T G S I S Y I N I I M P S V F G T I C 120
 121 L L G I I G N S T V I F A V V K K S K L 140
 141 H W C N N V P D I F I I N L S V V D L L 160
 161 F L L G M P F M I H Q L M G N G V W H F 180
 181 G E T M C T L I T A M D A N S O F T S T 200
 201 Y I L T A M A I D R Y L A T V H P I S S 220
 221 T K F R K P S V A T L V I C L L W A L S 240
 241 F I S I T P V W L Y A R L I P F P G G A 260
 261 V G C G I R L P N P D T D L Y W F T L Y 280
 281 O F F L A F A L P E V V I T A A Y V R I 300
 301 L Q R M T S S V A P A S Q R S I R L R T 320
 321 K R V T R T A I A I C L V F F V C W A P 340
 341 Y Y V L O L T O L S I S R P T L T F V Y 360
 361 L Y N A A I S L G Y A N S C L N P F V Y 380
 381 I V L C E T F R K R L V L S V K P A A Q 400
 401 G Q L R A V S N A Q T A D E E R T E S K 420
 421 G T 422

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FIGURE 4

1	GCAGGGACCTGCACCGGCTGCATGGATCTGCAAACCTCGTTGCTGTCCACTGGCCCCAA	60
61	TGCCAGCAACATCTCCGATGGCCAGGATAATCTCACATTGCCGGGTACCTCCTCGCAC	120
121	AGGGAGTGTCTCTACATCAACATCATTAATGCCTTCGTTGGTACCATCTGTCTCCT	180
181	GGGCATCGTGGGAAACTCCACGGTCATCTTTGCTGTGGTGAAGAAGTCCAAGCTACACTG	240
241	GTGCAGCAACGTCCCGACATCTTCATCATCAACCTCTCTGTGTGGATGCTGTCTTCCT	300
301	GCTGGCATGCCCTTTCATGATCCACAGCTCATGGGAACGGCTCTGGCACTTTGGGA	360
361	AACCATGTGCACCCCTCATCACAGCCATGGACGCCAACAGTCAGTTCACTAGCACCTACAT	420
421	CCTGACTGCCATGACCATTTGACCGTACTTGGCCACCGTCCACCCCATCTCCTCCACCAA	480
481	GTTCCGGAAGCCCTCCATGGCCACCGCTGGTGATCTGCTCCTGTGGGGCTCTCCTTCAT	540
541	CAGTATCACCCCTGTGTGGCTCTACGCCAGGTCATTCCCTTCCCAGGGGTGCTGTGGG	600
601	CTGTGGCATCCGGCTGCCAAACCCGGACACTGACCTCTACTGGTTCACCTGTACCACTT	660
661	TTTCCTGGCCCTTGGCCCTTCGGTTGTGGTCATTACGCCCGCATACGTGAAAATACTACA	720
721	CGGCATGACGTCTTCGGTGGCCCCAGCCTCCCAACGACAGCATCGGGCTTCGGACAAAGAG	780
781	GGTGACCCGACGGCCATTGCCATCTGTCTGTGTCTTCTTGTGTGCTGGGCACCCCTACTA	840
841	TGTGCTGCAGCTGACCCAGCTGTCCATCAGCCGCCACCCCTCAGCTTGTCTACTTGTGA	900
901	CAACGGGCCATCAGCTTTGGGCTATGCTAACAGCTGGCTGAACCCCTTTGTGTACATAGT	960
961	GCTCTGTGAGACCTTTCGAAACGCTTGGTGTGTGCTAGTGAAGCTGCAGCCCCAGGGCA	1020
1021	GCTCCGACGGTCAGCAACGCTCAGACAGCTGATGAGGAGGACAGAAAGCAAGGCAC	1080
1081	CTGACAAATCCCAGTCGGCTCCAGTCAAGTCAGGCCACCCCATCAACCGTGGGGAGAGATAC	1140
1141	TGAGATTAACCAAGGCTACCCCTGGGAGAAATGCAGAGGCTGGAGGCTGGGGGCTTGTAG	1200
1201	CAACCACATTCCAC	1214

FIGURE 6

IP release in MCH1- and
mock-transfected Cos-7 cells

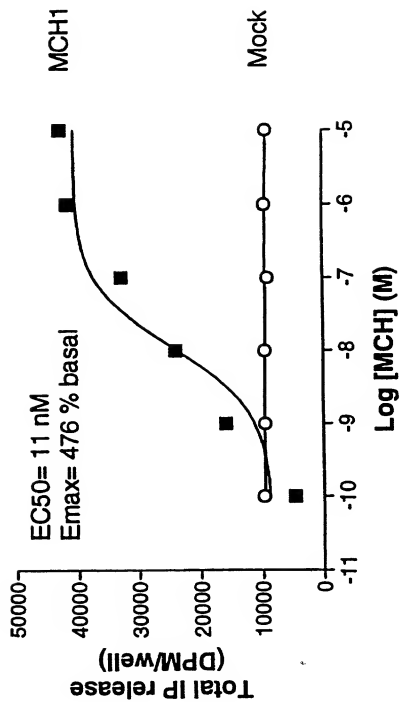
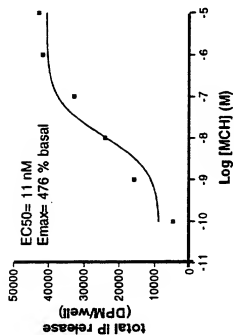
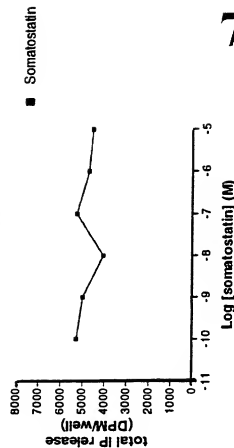


FIGURE 7

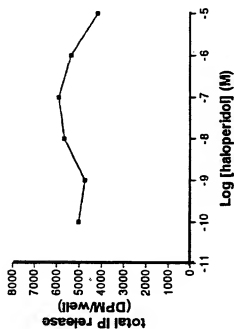
IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98



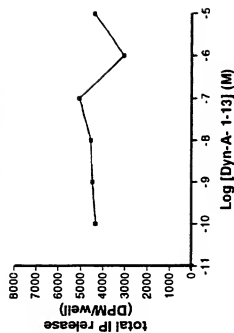
IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98



IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98



IP release in MCH1-transfected
Cos-7 cells
24 well, 10/9/98

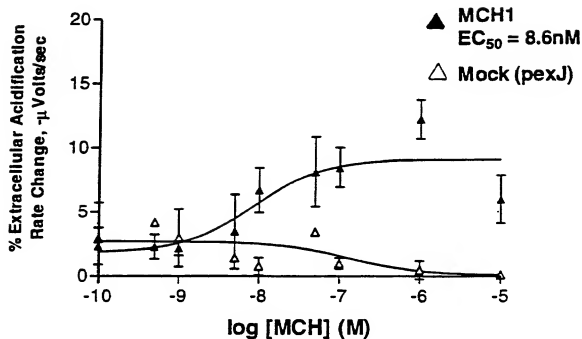


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FIGURE 8

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Microphysiometer Response
CHO cells



Microphysiometer Response
CHO cells

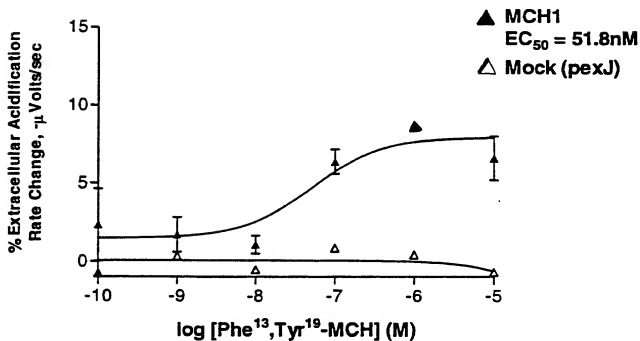
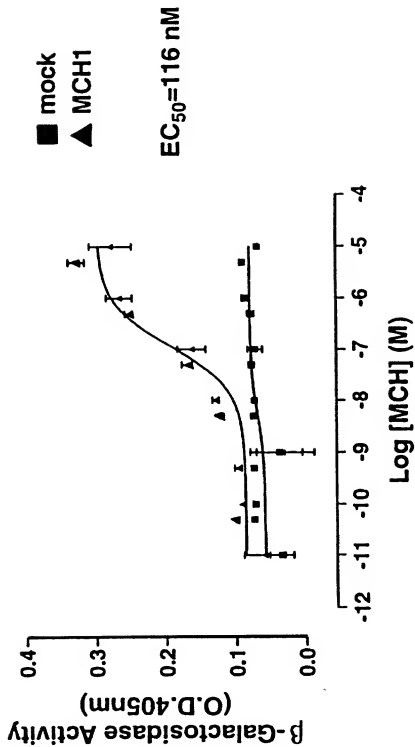


FIGURE 9

Agonist-Mediated c-fos- β -gal Activity in Cos-7 Cells

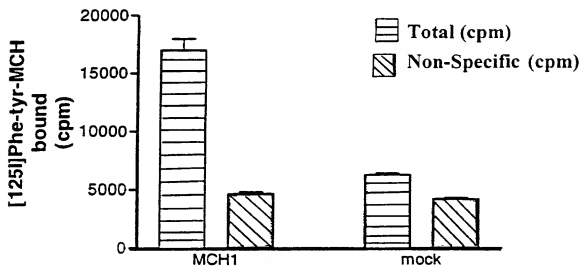


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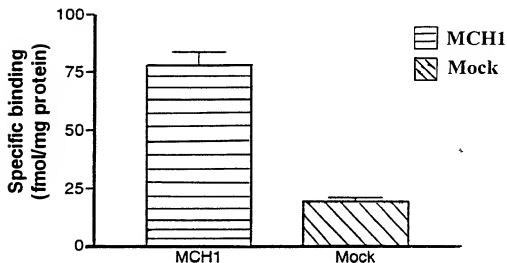
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FIGURE 10

**[¹²⁵I]Phe¹³-Tyr¹⁹-MCH
binding on transiently
transfected Cos-7 cells**

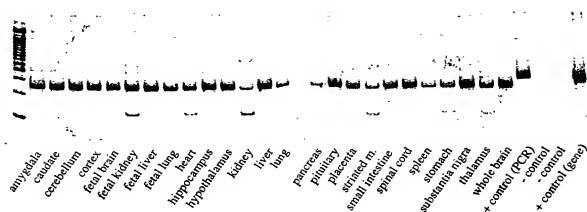


**[¹²⁵I]Phe¹³-Tyr¹⁹-MCH
binding on transiently
transfected Cos-7 cells**



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FIGURE 11



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FIGURE 12

TL231	1	MSVGMKKGV	GRAVGLGGGS	GCQATEEDPL	PDCGACAPGQ	40
R106		MSVGMKKGV	GRAVGLGGGS	GCQATEEDPL	PDCGACAPGQ	
R114		MSVGAaKKGV	GRAVGLGGGS	GCQATEEDPL	PDCGACAPGQ	
B0120		~~~~~	~~~~~	~~~~~	~~~~~	
TL231	41	GRRWRLPQ?	AWVEGSSARL	WEQATGTGWM	DEASLLPTG	80
R106		GRRWRLPQ?	AWVEGSSARL	WEQATGTGwa	DEASLLPTG	
R114		GRRWRLPQ?	AWVEGSSARL	WEQATGTGwa	DEASLLPTG	
B0120		~~~~~	~~~~~	~~~~~	~~~~~M DEASLLPTG	
TL231	81	PNASNTSDG?	DNLTSA GSP...			100
R106		PNASNTSDG?	DNLTSA GSP...			
R114		PNASNTSDG?	DNLTSA GSP...			
B0120		PNASNTSDG?	DNLTSA GSP...			

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FIGURE 13

1	M	S	V	G	A	M	K	K	G	V	G	R	A	V	G	L	G	G	S	20
21	G	C	Q	A	T	E	D	P	L	P	D	C	G	E	G	A	P	G	Q	40
41	G	G	R	R	W	L	P	Q	P	A	D	L	E	A	S	S	L	P	T	60
61	W	E	Q	A	T	G	T	G	W	A	D	L	E	A	S	S	L	P	T	80
81	P	N	A	S	N	T	S	Y	I	N	I	M	P	S	V	F	G	T	P	100
101	R	T	G	S	I	S	Y	I	N	I	M	P	S	V	F	G	T	P	P	120
121	L	L	G	I	I	G	N	S	T	V	I	F	A	V	V	K	K	S	K	140
141	H	W	C	N	N	V	P	D	I	F	I	I	N	L	S	V	V	D	L	160
161	F	L	L	G	M	P	F	M	I	H	Q	L	M	G	N	S	Q	F	T	180
181	G	E	T	M	C	T	L	I	T	A	M	D	A	N	S	Q	F	T	S	200
201	Y	I	L	T	A	M	A	I	O	R	Y	L	A	T	V	H	P	I	S	220
221	T	K	F	R	K	P	S	V	A	T	L	V	I	C	L	L	W	A	L	240
241	F	I	S	I	T	P	V	W	L	Y	A	R	L	I	P	F	P	G	G	260
261	V	G	C	G	I	R	L	P	N	P	D	T	D	L	Y	W	F	T	L	280
281	Q	F	F	L	A	F	A	L	P	F	V	V	I	T	A	A	Y	V	R	300
301	L	Q	R	M	T	S	S	V	A	P	A	S	Q	R	F	A	I	R	L	320
321	K	R	V	T	R	T	A	I	A	I	C	L	V	F	F	V	C	W	A	340
341	Y	Y	V	L	Q	L	T	Q	L	S	I	S	R	P	T	L	T	F	V	360
361	L	Y	N	A	A	I	S	L	G	Y	A	N	S	C	L	N	P	F	V	380
381	I	V	L	C	E	T	S	R	K	R	L	V	L	S	C	V	K	P	A	400
401	G	Q	L	R	A	V	S	N	A	Q	T	A	D	E	E	R	T	E	S	420
421	G	.																		422

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FIGURE 14

1	M	S	V	G	A	A	K	K	G	V	G	R	A	V	G	L	G	G	G	S	20	
21	G	C	Q	A	T	E	E	D	P	L	P	D	C	G	A	C	A	P	G	Q	40	
41	G	G	R	R	W	R	L	P	Q	P	A	W	V	E	G	S	S	A	R	L	60	
61	W	E	Q	A	T	G	T	G	W	A	D	L	E	A	S	L	L	P	T	G	80	
81	P	N	A	S	N	T	S	D	G	P	D	N	L	T	S	A	G	S	P	P	100	
101	R	T	G	S	I	S	Y	I	N	I	I	M	P	S	V	F	G	T	I	C	120	
121	L	L	G	I	I	G	N	S	T	V	I	F	A	V	V	K	K	S	K	L	140	
141	H	W	C	N	N	V	P	D	I	F	I	I	N	L	S	V	V	D	L	L	160	
161	F	L	E	G	M	P	F	M	I	H	Q	L	M	G	N	G	V	W	H	F	180	
181	G	E	T	M	C	T	L	I	T	A	M	D	A	N	S	Q	F	T	S	T	200	
201	F	I	L	T	A	M	A	I	D	R	Y	L	A	T	V	H	P	I	S	S	220	
221	T	K	F	R	K	P	S	V	A	T	L	V	I	C	L	L	W	A	L	S	240	
241	F	I	S	I	T	P	V	W	L	Y	A	R	L	I	P	F	P	G	G	A	260	
261	V	G	C	G	I	R	L	P	N	P	D	T	D	L	Y	W	F	T	L	Y	280	
281	Q	F	F	L	A	F	A	L	P	F	V	V	I	T	A	A	Y	V	R	I	300	
301	L	Q	R	M	T	S	S	V	A	P	A	S	Q	R	S	I	R	L	R	T	320	
321	K	R	V	T	R	T	A	I	A	I	C	L	V	F	F	V	C	W	A	P	340	
341	Y	Y	V	L	Q	L	T	Q	L	S	I	S	R	C	P	T	L	T	F	V	Y	360
361	L	Y	N	A	A	I	S	L	G	Y	A	N	S	C	L	N	P	F	V	Y	380	
381	I	V	L	C	E	T	F	R	K	R	L	V	L	S	V	K	P	A	A	Q	400	
401	G	Q	L	R	A	V	S	N	A	Q	T	A	D	E	R	T	E	S	K		420	
421	G	T																			422	

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FIGURE 15

1	M	D	L	E	A	S	L	L	P	T	G	P	N	A	S	N	T	S	D	G	20
21	P	D	N	L	S	V	F	G	T	I	C	L	W	G	I	I	G	N	I	N	40
41	I	I	M	P	S	V	K	K	S	K	L	H	C	N	I	N	V	P	D	I	60
61	V	I	F	A	V	V	K	K	S	D	L	F	F	L	G	M	P	F	M	I	80
81	F	I	I	N	L	S	V	V	D	L	L	F	F	L	G	M	P	F	M	I	100
101	H	Q	L	M	G	N	G	V	W	H	F	T	Y	I	L	T	M	C	A	M	120
121	A	M	D	A	N	S	Q	F	T	S	T	Y	I	L	T	M	C	A	M	A	140
141	R	Y	L	A	T	V	H	P	I	S	S	T	K	F	I	S	I	R	K	P	160
161	T	L	V	I	C	L	L	W	A	L	S	F	F	I	S	I	G	I	R	L	180
181	V	A	R	L	I	P	F	P	G	G	A	V	G	F	I	S	I	G	I	R	200
201	P	O	T	D	L	Y	W	F	T	L	Y	Q	F	F	I	S	I	G	I	R	220
221	F	V	V	I	T	A	A	Y	V	R	I	L	Q	R	V	M	T	R	S	S	240
241	P	A	S	Q	R	S	I	R	L	R	T	K	Y	V	L	Q	R	S	S	A	260
261	I	C	L	V	F	F	V	C	W	A	P	Y	Y	V	N	A	Q	R	S	A	280
281	S	I	S	R	F	T	L	T	F	V	Y	L	Y	N	A	C	E	T	S	N	300
301	Y	A	N	S	C	L	N	P	F	V	Y	I	V	L	C	E	T	S	N	A	320
321	R	L	V	L	S	V	K	P	A	A	Q	G	T	L	R	A	V	S	N	A	340
341	Q	T	A	D	E	E	R	T	E	S	K	G	T								353

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FIGURE 16

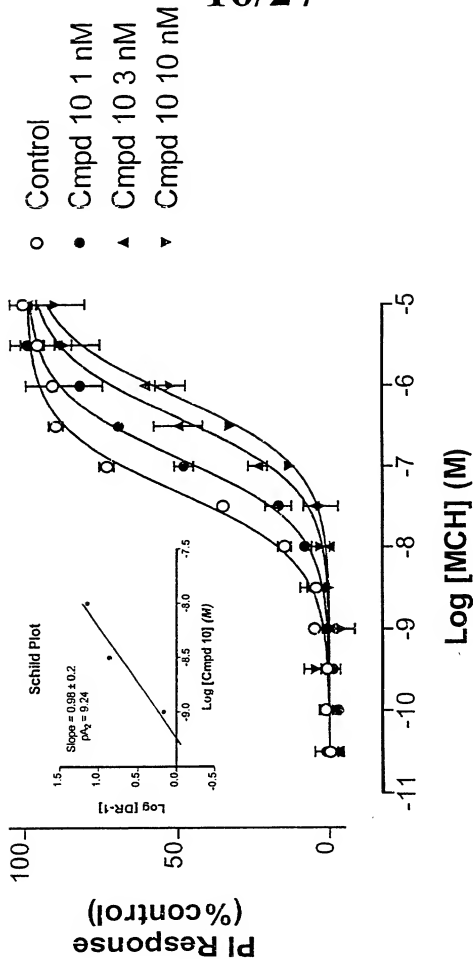


FIGURE 17

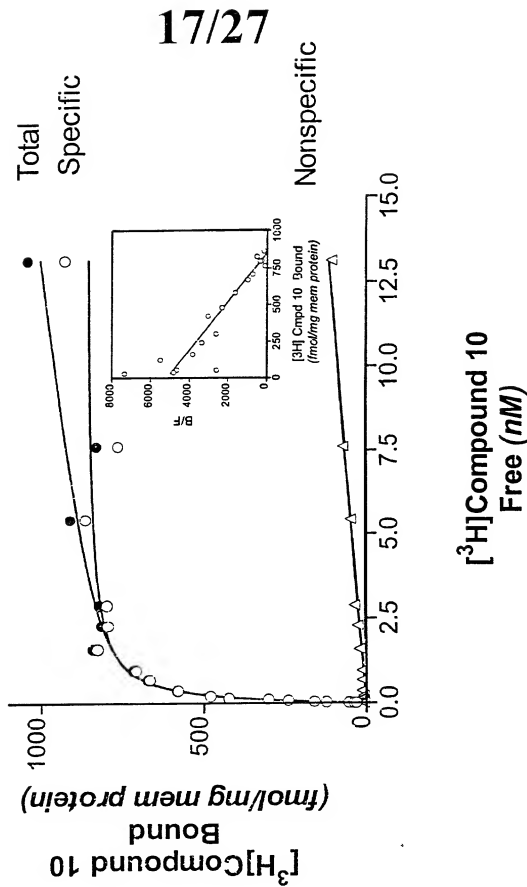
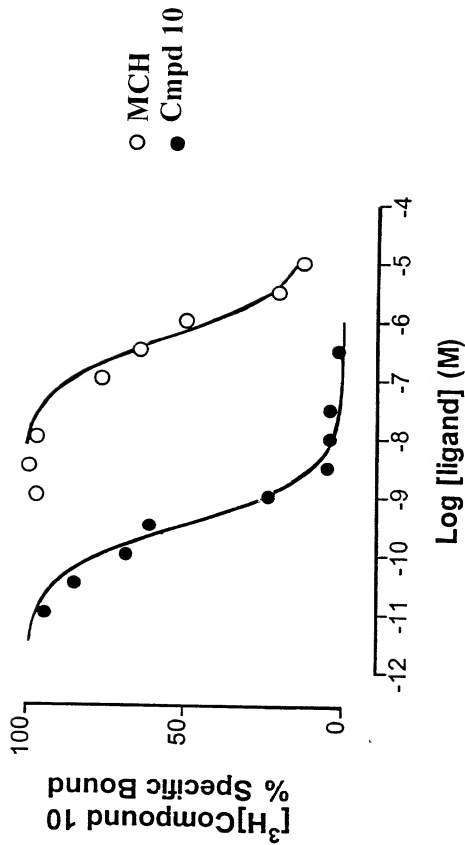


FIGURE 18



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FIGURE 19

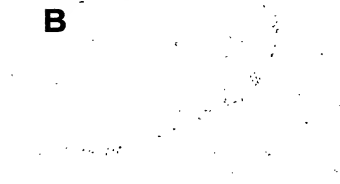
**Total MCH1
Receptor Binding**

A



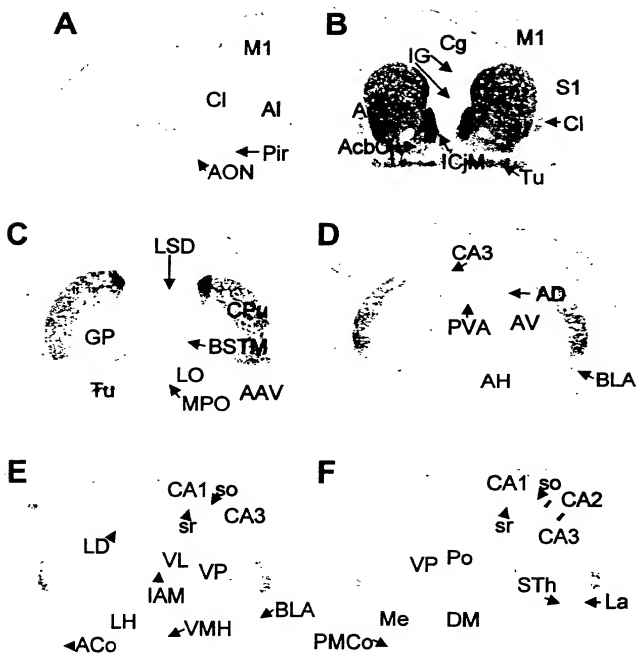
Nonspecific binding

B



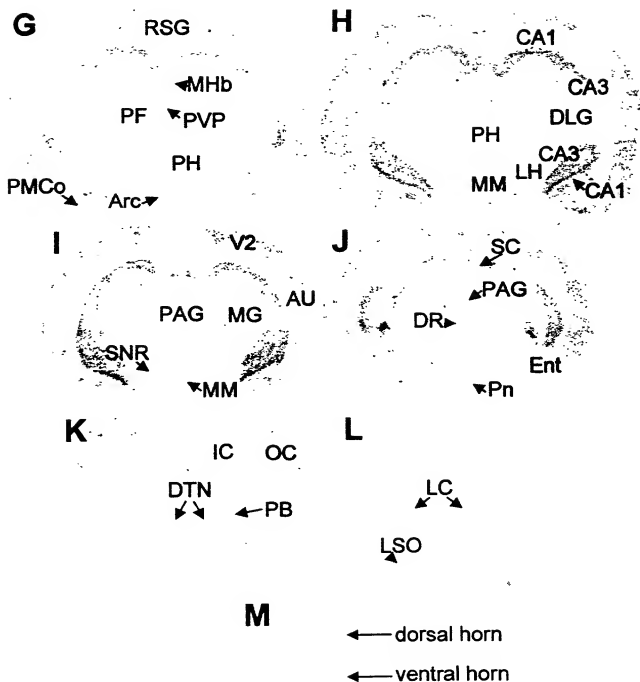
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FIGURE 20A



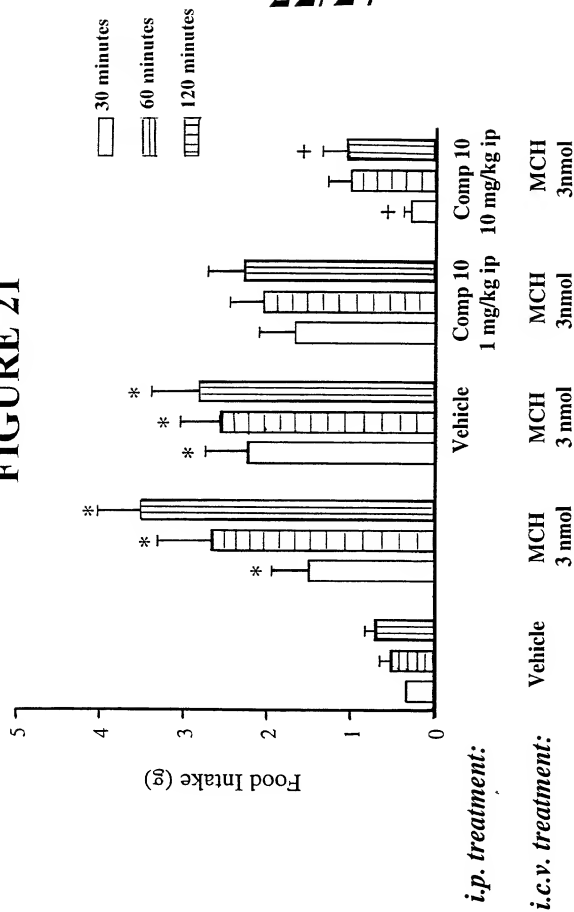
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FIGURE 20B



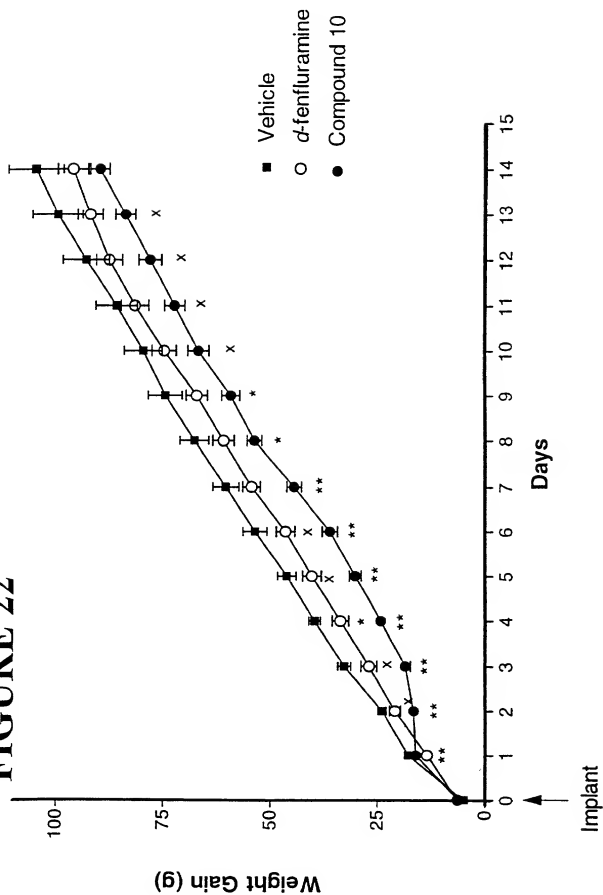
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FIGURE 21



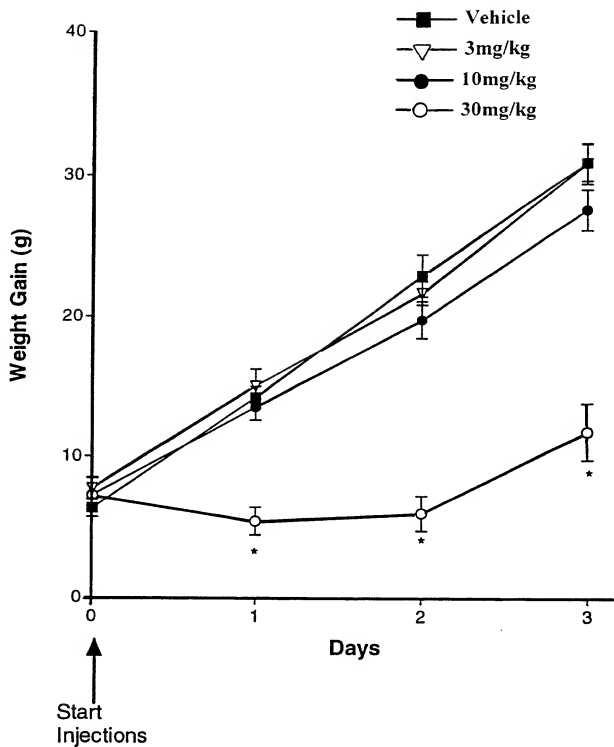
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FIGURE 22



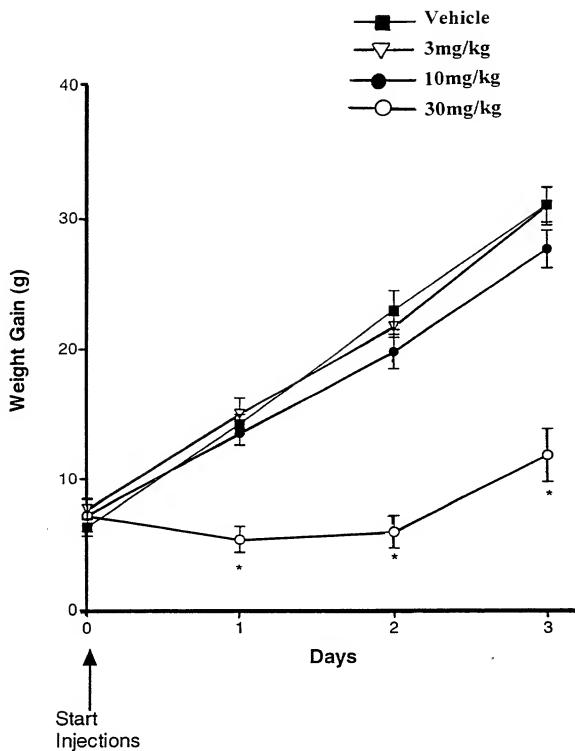
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FIGURE 23

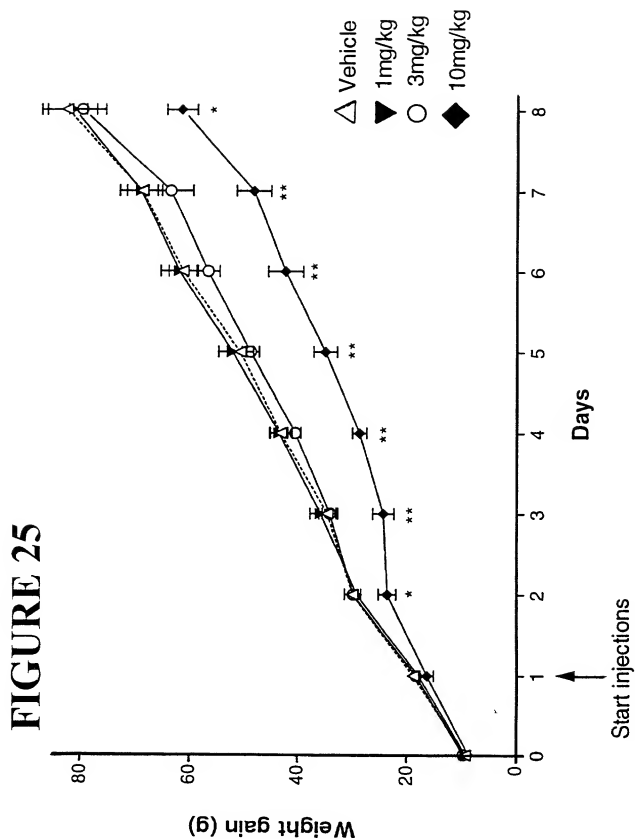


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FIGURE 24



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FIGURE 26

